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**Honors Geometry Pd 3**: HW#7 Linear Equations

**Due**: Tuesday, September 16th

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| 1) **Writing:** Describe the **steps** you would take to write an equation in point-slope form of the line that passes through the point (3, - 2) and (4, 5). | |
| 2) Write an equation in **point-slope form** of the line that passes through the given point and has the given slope *m.*   |  |  |  | | --- | --- | --- | | a) | b) | c) | | |
| Write an equation in **slope-intercept** form of the line with the given slope and y-intercept. ***Show your work! Box your answer!***  3) Slope: 5, y-intercept: 7 4) Slope: , y-intercept: 2 5) Slope: , y-intercept: 1 | |
| Write an equation in **slope-intercept** form of the line that passes through the given point and has the given slope *m.*  ***Show your work! Box your answer!***  6)  7)  8) | |
| Write an equation in **point-slope** form of the line that passes through the given points. ***Show your work! Box your answer!***  9)  10)  11) | |
| 12) A stylist earns $10 an hour plus $3 per haircut. Which equation represents the stylist’s hourly earnings?  F.  G.  H.  J.  K. none of the above  **Explain:** | 13) Write an equation in **standard form** of the line with the given characteristics: Slope:10, Passes through    14) Based on the **standard form** equation, find & box the  **y-intercept** (set x=0) and the **x-intercept** (set y=0). |

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| **PARALLEL PRACTICE** | | |
| 1) What is the slope of a line parallel to | 2) Write an equation for a line parallel to and travels through the point (5, -2) | |
| 3) Determine whether the two lines are parallel | | |
| 4) Find the value of *k* so that the lines through the given points are parallel. | | |
| a) Line 1: (-4, -2) and (0, 0)  Line 2: (2, 7) and (*k*, 5) | | a) Line 1: (-1, 9) and (-6, -6)  Line 2: (7, *k*) and (0, -2) |
| 5) **Challenge:** Find the slope and y-intecept of the graph of the equation Ax + By = C where B0. Use your results to find the slope and y-intercept of the graph of 3x + 2y = 18. | | |
| **PERPENDICULAR PRACTICE** | | |
| 1. Write the negative reciprocal for each of the following 2. 4 \_\_\_\_\_\_\_\_\_\_\_ 3. 7 \_\_\_\_\_\_\_\_\_\_\_ 4. \_\_\_\_\_\_\_\_\_\_\_ 5. \_\_\_\_\_\_\_\_\_\_\_ | 2) Write an equation of a line perpendicular to | |
| 3) Write an equation in slope – intercept form of a line passing through the point  (–2, –4) and **perpendicular** to . | 4) Determine which of the following equations are parallel or perpendicular to one another. Clearly label your answers and provide solid reasoning for your choice.  Line A: 3*y* – 2*x* = 12  Line B: *y* = –6*x* + 44  Line C: 3*y* = 2*x* – 13  Line D: 2*y* = –3*x* + 37 | |